AL.1.1327
c.2

The CENTRE

Food Processing Development Centre

Centre for Agri-Industrial Technology
Food Science & Technology, Brooks
Food Processing Development Centre
Sensory Evaluation Program

September 2002

Open House – May 29, 2002

To officially introduce our newly expanded facility, the staff of the Food Processing Development Centre hosted an open house on May 29. The Minister of Agriculture, Food and Rural Development, the Hon. Shirley McClellan, presented our Division Director, Ron Pettitt, with a plaque commemorating the occasion.

Our VIP guests, together with clients and suppliers, were taken on tours of the entire facility. Each staff team prepared a display to highlight their work, and were on hand to speak with our guests and describe the major pieces of equipment.

Following a short program in the pilot plant, the Hon. Shirley McClellan cut a cake prepared by our Bakery Scientist, Lorea Ladner. In the afternoon, we hosted "walk-about" tours for those on our Consumer Panel Database who take part in sensory evaluation taste panels, and any interested members of the public.

Our open house also provided an opportunity for our clients to display their products. Our newly re-designed reception area now features a splendid display of some of the products developed at the Centre for our clients.

Elsie Gross and Peter Davies greet Hon. Ty Lund, Minister of Alberta Infrastructure

Engineer Carla Brenner with display

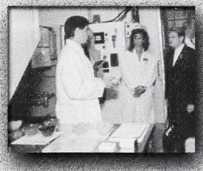
Dr. Darcy Driedger from our Brooks location

Dr. Kevin Swallow in the Mill Room

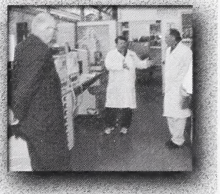
Commemmorative Cake

Sandra Perrin Sensory Evaluation Lab

Director Ron Pettitt addresses guests



Gabe Chemello and Connie Phillips show samples of extruded product to the Hon. Shirley McClellan



Chemist Les Dowdell showcasing the Product Development Lab

Plaque presented to FPDC Director Ron Pettitt by the Hon. Shirley McClellan

Alberta
AGRICULTURE, FOOD AND RURAL DEVELOPMENT

Food Processing Development Centre, 6309 - 45 Street, Leduc, Alberta, Canada T9E 7C5

Phone: (780) 986-4793 Fax: (780) 986-5183 http://www.agric.gov.ab.ca/

The Key to Successful Product Development

Connie Phillips is a Food Scientist and Manager of the Centre for Agri-Industrial Development who has worked with many of our clients. Following is an excerpt from her recent presentation on successful product development.

What separates the winners from the losers? Experts say that three quarters of the successful products are market derived, and characterized by:

- a correct identification of an existing demand.
- a logical stepwise flow of activities as the projects move from idea to launch.

Several key factors characterize successful products.

1. **Product superiority** to meet customer needs better, perform a unique task, lower customer costs, and be of higher quality than the competition.
2. **Strongly marketed** products are successful 79% of the time. Marketing activities include a preliminary market assessment, detailed studies, concept tests in the marketplace, prototype trials, and test marketing.
3. **Technological fit and proficiency.** Production activity must be not only competent, it must fit with the resource base of the company.
4. **Good management** of a project is more likely to lead to success. Most success factors are controllable – and success is not nearly as dependent on noncontrollable or situational factors as may be expected.

Risk management techniques are the cornerstone of successful product development.

- If uncertainties are high, keep amounts at stake low.
- As the uncertainties decrease, the amounts at stake can be increased.
- Incrementalize the new product process into a series of steps or stages involving smaller decisions.
- View each step as a means of reducing uncertainty remembering that information is the key to reducing uncertainty
- Provide for timely evaluations and bail-out points.

How can you reduce risk? Develop a staged plan like the one below for product development. Each stage is separated from the next one by a bail-out point. At each stage, evaluate how you're doing and decide if the risk in continuing is manageable.

1. **The Idea** – sparked when technological possibilities are matched with expected market needs and demand. This stage involves both idea generation and screening.
2. **Preliminary assessment:** significant resources are spent to gather information regarding the feasibility of a project.
3. **Concept definition** is the last up-front activity to happen before product development begins. In order to avoid a vague product definition which could become a "moving target," the product development group must agree on
   - the target market,
   - the product's concept,
   - the benefits the product will deliver
   - its positioning in the market,
   - the product's attributes
   - as far as possible, specifications.
4. **Development.** Actual product development begins in earnest. Technical resources people – the design, R & D, and engineers – are deeply involved and a prototype or product sample is the usual outcome of this stage. Paralleling the development of the product is the development of the marketing plan.
5. **The testing stage** is a validation of the product. For food products, testing related to safety, nutrition and physical characteristics is important to help define the product and determine potential problems. Consumer testing is conducted to gauge liking and preference.
6. **The trial stage** is a dry run of all commercial facets of the project - production, product design, and marketing. It is the first point in the project where everything comes together. A pilot production run tests the production method that will eventually be used. Modifications to facilities or methods are often required in order to solve unexpected problems.
7. **The launch stage** involves the start-up of full production and the implementation of the marketing plan in the total market area. Post-launch evaluations taking place at designated times provide benchmarks to gauge whether the product is on target.

This seven-stage plan minimizes risk because each activity reduces uncertainty. The plan is decidedly market oriented and there is an emphasis on the front end activities that precede the actual design and development of the product.

"Alberta entrepreneurs can access help throughout the development process," says Phillips. There are eighteen agencies offering various types of financial assistance, and the four locations comprising the Processing Development Division are fully equipped to strengthen the capability of Alberta processors to meet the challenges of new product development. On the next pages, meet a few of the companies who have successfully overcome these challenges.

Now Available: *Financial Assistance Available for Agri-Food Processors in Alberta.* Lists 18 agencies, their programs, and how to apply. Contact Kathleen Bunnin at the Food Processing Development Centre in Leduc to receive a copy.

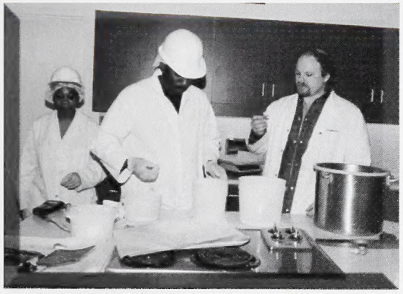
Cari-Bay Fine Foods Ltd.

Cari-Bay Fine Foods was established in 1999 by Dona Marshall and Art Deane, of Calgary, Alberta. Their company specializes in Caribbean Cuisine and in particular, Jamaican Jerk Seasoning. With the growth in popularity of Caribbean flavours, and the appeal of their particular recipes, Dona Marshall and Art Deane recognized the opportunity to produce these products commercially and market them to food service operators as well as retail outlets.

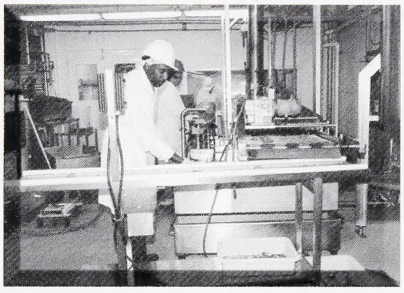
Cari-Bay came to the Food Processing Development Centre to request assistance with a scale-up of their recipe for marinated chicken wings, which they were selling locally within Edmonton and Calgary. Arie Vandermeer, one of the Centre's meat scientists, worked with the couple to develop a formulation and a process for commercial manufacture. Following development, samples were produced in the Centre's pilot plant and test marketed with potential buyers.

Cari-Bay's products were extremely well received. Their product line has been expanded to include ten flavours of chicken wings as well as two pork products – Jerk Roast and Jerk Kababs. Cari-Bay have now hired their own staff and are arranging for their own production facility. In the meantime, Marshall and Deane have opened a retail outlet in Calgary, where they showcase their chicken and pork products. Not only that, but they are carrying several other products manufactured at the Centre by companies they met while working at Leduc.

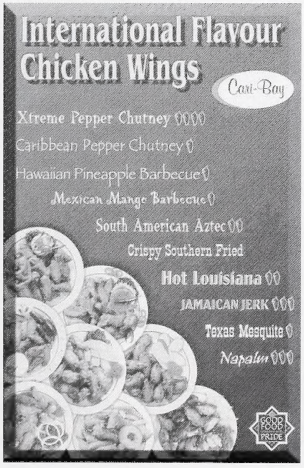
Cari-Bay will continue to produce their line at the Food Processing Development Centre until their own plant is ready. During the past year, over 20,000 kilograms of wings have been produced and marketed.

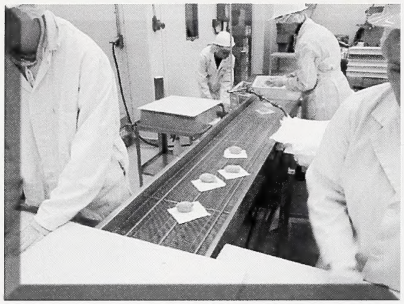


Dona Marshall and Art Deane consult with meat scientist Arie Vandermeer.



Art Deane on the production line.





Country Mom crew assembling their poultry dressing rolls in FPDC's pilot plant.

Each unit is hand-rolled.

Shiela Shtuka displays the finished product, ready to be frozen.

Country Mom Foods Ltd.

Country Mom Foods Limited was established in 1997 by Maurice Maheu, of Edmonton, Alberta. The company produces and markets a variety of stuffed puff pastry products, including Poultry Dressing Rolls – savory poultry dressing wrapped in a delicate puff pastry – and Omelet Wellingtons, a seasoned egg mixture folded into puff pastry. The products have been extremely well received.

Maurice Maheu came to the Centre with only his home recipe for a dressing roll. He worked with food scientist Marek Gierus to develop formulations and processing procedures. Commercial production was begun using the Centre's pilot plant. Maheu has added beef and pork products to his line, as well as the Omelet Wellingtons. Country Mom originally worked with Lilydale Foods to distribute the products, but now Maheu has taken on distribution and sales himself.

Sales are currently exceeding 900 cases per month, a 35% increase over the last year. Country Mom's products can be found in the Delicatessen department in Sobey's (IGA) stores and Overwaitea Foods (Save-On) throughout western Canada.

Country Mom has been producing this line at the Food Processing Development Centre for about two years while pursuing a co-packing arrangement and purchase of more automated equipment. Maheu recently acquired a Rondo high speed processing machine, and has reached an agreement with Royal Foods to install the equipment in Royal's Edmonton plant. Once in full operation, Country Mom's capacity will be greatly increased to meet a growing demand.

Select Food Services Ltd.

Select Food Services Ltd. was established in 1997 in Edmonton, Alberta. The company started out producing Boneless Dry Ribs for local restaurants. Select recognized the potential for this style of product for food service operators as well as retail consumers. Their original product tended to be inconsistent in quality and appearance. In order to access these larger markets, improvements would need to be made.

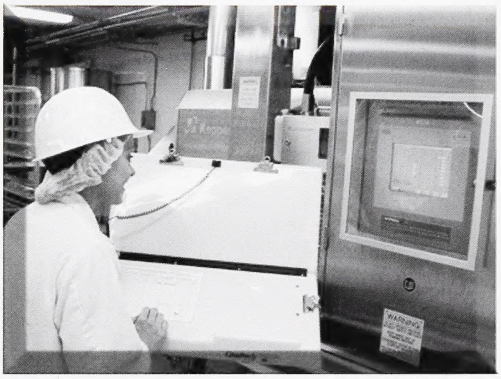
Select requested assistance from the Food Processing Development Centre to help improve the quality and consistency of their product. Formulations were adjusted and new processing procedures were developed to address these issues. The product was very well received.

Select continued to produce the ribs in the Centre's pilot plant plant until 1999, when they moved into their new federally inspected processing facility in Edmonton. Their line was expanded to include a Ginger Beef version of the product and formed Dino Ribs for the children's market. Sales have been so successful that Select's new facility is operating at capacity.

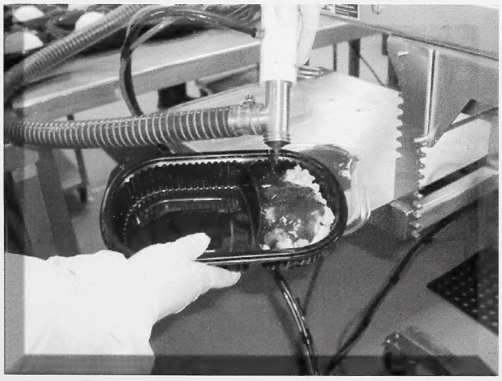
Recently, Select has returned to the Centre for assistance in developing entrees for the Home Meal Replacement market. Six varieties have been developed and are now being manufactured at the Centre. The products are being distributed through Sobey's (IGA) stores, and Select is currently looking for an additional facility for the entrée production.

The rapid growth of this company is truly a success story.

Maria Swain removes product from the Roschermatic meat tumbler.



Tammy Hunka documents a temperature on the chart for the day's production run.



Using a piston filler to add sauce to the home meal replacement tray.

ROCKY MOUNTAIN
FOOD SERVICES LTD.
Fast Food Never Tasted So Good.
Select Food Services specializes in manufacturing high quality food products. Retailers, food services operators and consumers will enjoy a family of products that are superior in taste and convenient to prepare. All of our products offer outstanding value and profitable margins. With any Select Food Services' product the consumer will be dining in less than five minutes!
Original Dry Ribs
Honey Garlic Pork
Sweet & Sour Pork
Ginger Beef
Dino Ribs

National Library of Canada
Bibliothèque nationale du Canada
3 3286 52632290 0

Welcome to . . . .

Aaron Bischoff
Processing Technologist

Mr. Bischoff joined the staff of the Centre for Agri-Industrial Technology in May where his primary responsibility will be to establish a preventative maintenance program for the equipment housed at CAIT, as well as installation and repair of equipment at CAIT.

Bischoff graduated from NAIT in 2002 with a diploma in Mechanical Engineering Technology, and he is experienced in 4th Class Power Engineering. Following graduation, he worked as a mechanical engineering technologist at the Agriculture Value-Added Engineering Centre in Edmonton.

In addition to his preventive maintenance work at CAIT, Aaron will be the primary CAIT contact in the Joint Worksite Health and Safety Committee, and is preparing a hazard assessment of installed equipment.

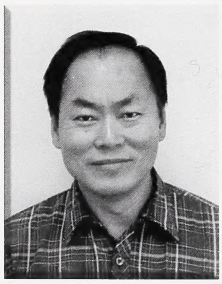
Elizabeth Melnichuk
HACCP/Quality Assurance Coordinator

Ms. Melnichuk joined us in June of 2002 as our HACCP/Quality Assurance Coordinator following the recent retirement of Allan Hayman. Elizabeth is responsible for completing and implementing the Centre's HACCP plan. She completed her B.Sc. in Nutrition and Food Science at the University of Alberta in 1998. Since then, she has worked with Caravelle Foods, Lilydale Foods and Principality Foods and as a HACCP consultant for Western Beef Jerky and Aliya's Foods Ltd. She also has several years' experience in product labeling, and she worked as a quality assurance laboratory technician part-time while she was a student.

Having recently taken several short courses related to quality assurance, Ms. Melnichuk brings a solid background to her position. She is also competent in French reading and writing.

Away from work, Elizabeth plays clarinet and enjoys a Dance Moves fitness program along with a variety of other interests.

Danny Lim
Food Scientist



Mr. Lim joined the staff of the Food Processing Development Centre in June of 2002 to fill in for dairy scientist Jacqueline Martin Lopez who is currently on leave until March 2003. Mr. Lim brings twelve years of quality control and supervisory experience in the dairy, meat and fruit juice industries. He is well versed in development and maintenance of good manufacturing practice, plant sanitation, and HACCP work. In addition, Mr. Lim carried out microbial and food chemical analysis of fruit juices, feed, meat and dairy products, as well as new product development.

Mr. Lim is an experienced translator, having served as a volunteer in this capacity for newcomers during the immigration process, and at court proceedings.

While at the Centre, Mr. Lim will be working as a project leader for clients doing interim processing of meat products, as well as development of a variety of products.

Judy Kohlsmith
Administrative Support

Ms. Kohlsmith's voice is the new caller's first introduction to the Food Processing Development Centre in Leduc. She joined our staff in May of 2002, replacing Gladys Osborne who recently retired as administrative support to the Centre's twenty other staff members.

She has worked with the Alberta government for many years, most recently at the Bison Centre in Leduc.

As with all administrative support positions, Judy is expected to know everything, and be able to do it all at once. She handles reception, correspondence, records disposition, and the myriad of "related duties" that characterize every efficient office. Her strong computer skills keep her in demand as everyone's coach. "It's incredibly busy here at the Centre," she says. We can all attest to that!